

The opinion in support of the decision being entered today was **not** written for publication in a law journal and is **not** binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** KENJI YOSHIKAWA, KATSUHISA TANAKA and KOUICHI KOJIMA

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Appeal No. 1998-2869  
Application 08/453,496

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HEARD: February 6, 2001

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Before HAIRSTON, FLEMING, and BARRY, **Administrative Patent Judges.**

FLEMING, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1, 12 and 16 through 20. Claims 2 through 11, 13 and 15 have been allowed by the Examiner. Claim 14 stands objected to as being dependent upon a rejected base claim, but

has been

indicated by the Examiner to be allowable if rewritten in independent form.

The invention relates to a driving state-monitoring apparatus for automotive vehicles, which monitors the driving state of the driver of the automotive vehicle, and gives an alarm, if necessary. For example, if the driver causes the automotive vehicle to be steered abnormally due to the driver dozing, the driving state-monitoring apparatus will give an alarm to awake the driver.

Independent claim 1 is reproduced as follow:

1. A driving state-monitoring apparatus for an automotive vehicle, for monitoring a driving state of a driver of said automotive vehicle, comprising:

behavior parameter-detecting means for detecting a behavior parameter indicative of an amount of behavior related to at least one of yawing movement and lateral movement of said automotive vehicle;

vehicle speed-detecting means for detecting a speed of said automotive vehicle;

behavior reference parameter-setting means for setting a behavior reference parameter based on changes in said behavior parameter;

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lateral deviation behavior amount-calculating means for calculating a lateral deviation behavior amount of said automotive vehicle, based on said behavior parameter, said behavior reference parameter, and said speed of said automotive vehicle;

driving state-determining means for determining whether or not said driving state of said driver is normal, based on said lateral deviation behavior amount; and

abnormality-determining means responsive to at least a determination by said driving state-determining means that said driving state of said driver is not normal, for determining that said driving state of said driver is abnormal.

The references relied on by the Examiner are as follows:

Shiraishi et al. (Shiraishi '657) 26, 1991	4,996,657	Feb.
Shiraishi et al. (Shiraishi '636) 19, 1991	5,001,636	Mar.

Claims 1, 12 and 17 through 20 stand rejected under 35 U.S.C. § 102 as being anticipated by Shiraishi '636. Claim 16 stands rejected under 35 U.S.C. § 103 as being unpatentable over Shiraishi '636 in view of Shiraishi '657.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the briefs<sup>1</sup> and answer for the

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<sup>1</sup>Appellants filed an appeal brief on June 27, 1997. Appellants filed a reply brief on September 29, 1997. The Examiner mailed an office communication on December 22, 1997 stating that the reply brief has been entered and considered

details thereof.

#### OPINION

After a careful review of the evidence before us, we do not agree with the Examiner that claims 1, 12 and 17 through 20 are anticipated by Shiraishi '636, nor do we agree with the Examiner

that claim 16 is unpatentable in view of Shiraishi '636 and Shiraishi '657.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See *In re King***, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and ***Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.***, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

Appellants argue that the yaw motion control device of Shiraishi '636 is, generally, fundamentally distinct from the driving state-monitoring apparatus as defined in each of independent claims 1 and 12 because Shiraishi's device does

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but no further response by the Examiner is deemed necessary.

not include and is never concerned with a driving state-determining means for determining whether or not the driving state of the vehicle driver is normal/abnormal as defined in claims 1 and 12. Appellants point out that the yaw motion control device of Shiraishi '636 automatically controls the vehicle's yaw rate according to quantitative differences or slippages between the reference yaw rate and a detected, actual yaw rate of the vehicle. Shiraishi's yaw motion control system is effectively based on a presumption that the driver is driving normally. See pages 8 through 11 of Appellants' brief.

On page 10 of the Examiner's answer, the Examiner agrees that Shiraishi '636 does not address a consideration of whether the vehicle driver is driving normally or abnormally. The Examiner argues that "independent claims 1 and 12 do not claim or detailedly describe what and how to define the normal/abnormal behavior parameter from a driver or human, such as a relationship between the driver's intentions and vehicle movement on the road so that the system detecting vehicle driver is driving normally or abnormally." The

Examiner further argues that because independent claims 1 and 12 do not set forth this limitation, Shiraishi's '636 yaw rate motion control device reads on Appellants' claims.

In response, Appellants argue that the Examiner's asserted position is in conflict with the sixth paragraph of 35 U.S.C. § 112. Appellants argue that the claimed "driving state-determining means for determining whether or not said driving state of said driver is normal, based on said lateral deviation behavior amount" must be interpreted as limited to the corresponding structure, materials or acts described in the specification and equivalents thereof.

Appellants argue that this means-plus-function limitation must be read in light of the specification starting on page 6, line 13, through page 10, line 25, in which a detailed description is provided on just how the driving state determining means determines whether the driving state of the driver is normal, irrespective of the road surface conditions and differences in the driving skill between individual drivers, based on the lateral deviation behavior amount, which is in turn based on the behavior reference parameter. See pages 2 and 3 of

Appellants' Reply Brief.

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." *In re Hiniker Co.*, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Furthermore, our reviewing court has stated in *In re Donaldson Co.*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994) that the "plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure."

Upon our review of Appellants' independent claims 1 and 12, we find that these claims recite means-plus-function language which falls under 35 U.S.C. § 112, sixth paragraph, which requires us to interpret this claim language by looking to the specification for the corresponding structure and equivalents thereof. Independent claim 1 recites "driving state-determining means for determining whether or not said

driving state of said driver is normal, based on said lateral deviation behavior amount." Appellants' independent claim 12 recites "means for determining whether the driving state of the driver is abnormal based on said lateral deviation behavior amount."

Turning to Appellants' specification, page 6, line 13, through page 10, line 25, we find that the corresponding structure relates to a microcomputer 1 having functions which are represented as functional blocks as shown in figure 1. This corresponding structure of the driving state determining means determines whether the driving state of the driver is normal, irrespective of road surface conditions and differences in the driving skill between individual drivers. Such determination are made based on lateral deviation behavior amounts, and on behavior references parameters shown in figure 2b.

In view of the requirement of 35 U.S.C. § 112, sixth paragraph, which requires us to interpret Appellants' claimed driver's state determining means based upon the corresponding structure as described in Appellants' specification, we fail

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to find such a limitation being anticipated by Shiraishi '636. Furthermore, we find that the Examiner has erred in interpreting the claims as not requiring a driving state determining means which determines the state of the driver as being normal or abnormal. Therefore, we will not sustain the Examiner's rejection of claims 1, 12 and 17 through 20 under 35 U.S.C. § 102.

Furthermore, we note that claim 16 is dependent upon claim 12 and the Examiner has relied on Shiraishi '636 for the limitations found in claim 12. Therefore, for the reasons given above, we will not sustain the rejection of claim 16 under 35 U.S.C. § 103.

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In view of the foregoing, the decision of the Examiner  
rejecting claims 1, 12 and 16 through 20 is reversed.

**REVERSED**

KENNETH W. HAIRSTON	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
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LANCE LEONARD BARRY	)	
Administrative Patent Judge	)	

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